Claim 1 (Currently Amended): A recombinant bovine adenovirus vector comprising a modification in a polynucleotide encoding a capsid protein, or fragment thereof, wherein said capsid protein, or fragment thereof, is associated with tropism and wherein said modification is associated with altered tropism.

Claim 2 (Previously Presented): The adenovirus vector of claim 1 wherein said polynucleotide encoding a capsid protein, or fragment thereof, is replaced with a polynucleotide encoding a heterologous mammalian adenovirus capsid protein, or fragment thereof.

Claim 3 (Original): The adenovirus vector of claim 1 wherein said capsid protein, or fragment thereof, is a penton protein, or fragment thereof.

Claim 4 (Original): The adenovirus vector of claim 1 wherein said capsid protein, or fragment thereof, is a hexon protein, or fragment thereof.

Claim 5 (Original): The adenovirus vector of claim 1 wherein said capsid protein, or fragment thereof, is a fiber protein, or fragment thereof.

Claim 6 (Previously Presented): The adenovirus vector of claim 5 wherein the fiber protein, or fragment thereof, comprises the knob region of a fiber protein.

Claim 7 (Previously Presented): The adenovirus vector of claim 3 wherein said polynucleotide encoding the penton protein, or fragment thereof, is replaced with at least one polynucleotide encoding a heterologous mammalian adenovirus penton protein, or fragment thereof.

Claim 8 (Previously Presented): The adenovirus vector of claim 4 wherein said polynucleotide encoding the hexon protein, or fragment thereof, is replaced with at least one polynucleotide encoding a heterologous mammalian adenovirus hexon protein, or fragment thereof.

Claim 9 (Previously Presented): The adenovirus vector of claim 5 wherein said polynucleotide encoding the fiber protein, or fragment thereof, is replaced with at least one polynucleotide encoding a heterologous mammalian adenovirus fiber protein or fragment thereof.

Claim 10 (Original): The adenovirus vector of claim 2 wherein said heterologous mammalian adenovirus capsid protein, or fragment thereof, includes porcine, ovine, canine or human adenovirus capsid protein, or fragment thereof.

Claim 11 (Original): The adenovirus vector of claim 10 wherein said heterologous mammalian adenovirus capsid protein, or fragment thereof, is a human adenovirus capsid protein, or fragment thereof.

Claim 12 (Original): The adenovirus vector of claim 1 wherein said adenovirus is a sub-type 1 adenovirus.

Claim 13 (Original): The adenovirus vector of claim 1 wherein said adenovirus is a sub-type 2 adenovirus.

Claim 14 (Original): The adenovirus vector of claim 12 wherein said adenovirus vector is BAV3.

Claim 15 (Previously Presented): The adenovirus vector of claim 14 wherein said modification in a polynucleotide encoding a capsid protein, or fragment thereof, is a replacement of a polynucleotide encoding a BAV3 fiber protein, or fragment thereof, with a polynucleotide encoding a heterologous mammalian adenovirus fiber protein, or fragment thereof.

Claim 16 (Previously Presented): The adenovirus vector of claim 15 wherein said mammalian adenovirus fiber protein, or fragment thereof, includes bovine, porcine, ovine, canine or human adenovirus fiber protein, or a fragment thereof.

Claim 17 (Original): The adenovirus vector of claim 16 wherein said mammalian adenovirus fiber protein is a human adenovirus fiber protein.

Claim 18 (Original): The adenovirus vector of claim 1 wherein said vector lacks E1 function.

Claim 19 (Original): The adenovirus vector of claim 18 wherein said vector has a deletion of part or all of the E1 gene region.

Claim 20 (Original): The adenovirus vector of claim 1 wherein said vector has a deletion of part or all of the E3 gene region.

Claim 21 (Original): The adenovirus vector of claim 1 wherein said vector further comprises a polynucleotide encoding a heterologous protein.

Claim 22 (Previously Presented): The adenovirus vector of claim 21 wherein said heterologous protein includes cytokines; lymphokines; membrane receptors recognized by pathogenic organisms; dystrophins; insulin; proteins participating in cellular ion channels; antisense RNAs; proteins capable of inhibiting the activity of a protein produced by a pathogenic gene; a protein inhibiting an enzyme activity; protein variants of pathogenic proteins; antigenic epitopes; major histocompatibility complex classes I and II proteins; antibodies; immunotoxins; toxins; growth factors or growth hormones; cell receptors or their ligands; tumor suppressors; cellular enzymes; or suicide genes.

Claim 23 (Original): The adenovirus vector of claim 22 wherein said polynucleotide encoding said heterologous protein is inserted in the adenovirus E1 gene region.

Claim 24 (Original): The adenovirus vector of claim 22 wherein said polynucleotide encoding said heterologous protein is inserted in the adenovirus E3 gene region.

Claim 25 (Original): The adenovirus vector of claim 1 wherein said vector is replication-competent.

Claim 26. (Original): The adenovirus vector of claim 1 wherein said vector is replication-defective.

Claim 27 (Original): A host cell comprising the bovine adenovirus vector of claim 1.

Claim 28 (Original): A host cell comprising the bovine adenovirus vector of claim 21.

Claim 29 (Currently Amended): A method of producing a recombinant bovine adenovirus vector comprising a modification in a polynucleotide encoding a capsid protein, or a fragment thereof, comprising the steps of, obtaining a bovine adenovirus vector~~; and introducing a~~ comprising a modification ~~into~~ in a polynucleotide encoding a capsid protein, or fragment thereof, wherein said capsid protein, or fragment thereof, is associated with tropism and wherein said modification is associated with altered tropism, and culturing the adenovirus vector under conditions suitable for production of the bovine adenovirus vector.

Claim 30 (Original): The method of claim 29 wherein said capsid protein, or fragment thereof, is a penton protein, or fragment thereof.

Claim 31 (Original): The method of claim 29 wherein said capsid protein, or fragment thereof, is a hexon protein, or fragment thereof.

Claim 32 (Original): The method of claim 29 wherein said capsid protein, or fragment thereof, is a fiber protein, or fragment thereof.

Claim 33 (Original): The method of claim 29 wherein said adenovirus vector further comprises a polynucleotide encoding a heterologous protein.

Claim 34 (Original): The method of claim 29 wherein said bovine adenovirus is a sub-type 1 bovine adenovirus.

Claim 35 (Original): A recombinant bovine adenovirus comprising a modification in a polynucleotide encoding a capsid protein, or fragment thereof, wherein said capsid protein, or fragment thereof, is associated with tropism and wherein said modification is associated with altered tropism.

Claim 36 (Original): The recombinant adenovirus of claim 35 further comprising a polynucleotide encoding a heterologous protein.

Claim 37 (Original): The recombinant adenovirus of claim 36 wherein said polynucleotide encoding said heterologous protein is inserted in the adenovirus E1 gene region.

Claim 38 (Original): The recombinant adenovirus of claim 36 wherein said polynucleotide encoding said heterologous protein is inserted in the adenovirus E3 gene region.

Claim 39 (Original): The recombinant adenovirus of claim 35 wherein said capsid protein, or fragment thereof, is a penton protein, or fragment thereof.

Claim 40 (Original): The recombinant adenovirus of claim 35 wherein said capsid protein, or fragment thereof, is a hexon protein, or fragment thereof.

Claim 41 (Original): The recombinant adenovirus of claim 35 wherein said capsid protein, or fragment thereof, is a fiber protein, or fragment thereof.

Claim 42 (Previously Presented): The recombinant adenovirus of claim 41 wherein the fiber protein, or fragment thereof comprises the knob region of a fiber protein.

Claim 43 (Currently amended): An immunogenic composition comprising a recombinant bovine adenovirus wherein said adenovirus comprises a modification in a polynucleotide encoding a capsid protein, or fragment thereof, and wherein said capsid protein, or fragment thereof, is associated with tropism and wherein said modification is associated with altered tropism.

Claim 44 (Original): The immunogenic composition of claim 43 wherein said capsid protein is a penton protein, or fragment thereof.

Claim 45 (Original): The immunogenic composition of claim 43 wherein said capsid protein is a hexon protein, or fragment thereof.

Claim 46 (Original): The immunogenic composition of claim 43 wherein said capsid protein is a fiber protein, or fragment thereof.

Claim 47 (Previously Presented): The immunogenic composition of claim 46 wherein said fiber protein, or fragment thereof, comprises the knob region of a fiber protein.

Claim 48 (Previously Presented): The immunogenic composition of claim 43 wherein said modification in a polynucleotide encoding a capsid protein or fragment thereof is a replacement of a polynucleotide encoding a bovine fiber protein, or fragment thereof, with a polynucleotide encoding a mammalian adenovirus fiber protein, or fragment thereof.

Claim 49 (Previously Presented): The immunogenic composition of claim 48 wherein said mammalian adenovirus fiber protein, or fragment thereof, is a human adenovirus fiber protein, or fragment thereof.

Claim 50 (Original): The immunogenic composition of claim 43 wherein said bovine adenovirus is a sub-type 1 adenovirus.

Claim 51 (Original): The immunogenic composition of claim 50 wherein said bovine adenovirus is BAV3.

Claim 52 (Original): The immunogenic composition of claim 43 wherein said bovine adenovirus comprises a polynucleotide encoding a heterologous protein.

Claim 53 (Original): A pharmaceutical composition capable of inducing an immune response in a mammalian subject, said composition comprising the immunogenic composition of claim 52.

Claim 54 (Original): The pharmaceutical composition of claim 53 further comprising a pharmaceutically acceptable excipient.

Claim 55 (Currently Amended): A method for eliciting an immune response in a mammalian host ~~to protect against infection~~, the method comprising administration of the pharmaceutical composition of claim 54 to the mammalian host, wherein said heterologous protein comprises an antigenic epitope.

Cancel Claims 56-63

Claim 64 (Previously Presented): A composition comprising the adenovirus vector of claim 1.

Claim 65 (Previously Presented): A composition comprising the adenovirus vector of claim 5.

Claim 66 (Previously Presented): A composition comprising the adenovirus vector of claim 21.

Claim 67 (Previously Presented): A composition comprising the adenovirus of claim 35.

Claim 68 (Previously Presented): A composition comprising the adenovirus of claim 41.

Claim 69 (Previously Presented): The immunogenic composition of claim 48 wherein said mammalian adenovirus fiber protein, or fragment thereof, includes porcine, ovine, canine or human adenovirus capsid protein, or fragment thereof.

Claim 70 (Previously Presented): A host cell comprising the adenovirus vector of claim 5.

Claim 71 (Previously Presented): A host cell comprising the adenovirus of claim 35.

Claim 72 (Previously Presented): A host cell comprising the adenovirus of claim 41.